5.0 SAMPLING ACTIVITIES AND RESULTS

5.1 WATER COLUMN SAMPLING RESULTS

The water column samples were shipped to the analytical laboratory the day following collection. Prior to the laboratory filtering each water column sample, an aliquot was separated from the sample and analyzed for organic carbon. The sample was then filtered by the laboratory using a 0.7-micron glass fiber filter and was separated into dissolved and particulate phases. The dissolved phase was analyzed for PCBs and organic carbon, and the particulate phase was analyzed for PCBs only, due to the lack of solids in the sample. The concentration of organic carbon in the particulate phase was estimated by subtracting the concentration of organic carbon measured in the total sample from the concentration in the dissolved phase.

5.1.1 PCBs

The PCB Aroclor concentrations at all of the sample locations from Pile #3 and Pile #2 were below the maximum laboratory practical quantitative limit (PQL) of 0.01 µg/L for Aroclor 1221 or 0.005 µg/L for the remaining Aroclors. The results of the steady state sample collected at Pile #1 indicated that PCBs as Aroclors were not reported above the PQL. Table 5-1 summarizes the analytical chemistry results for detectable Aroclors.

The sampling at Pile #1 indicated that PCBs as Aroclor 1254 were detected at 0.0186 µg/L (Sample number 05WC) and 0.0218 µg/L (Sample number 07WC) in the particulate phase and at 0.0308 µg/L (Sample number 07WC) in the dissolved phase. The field duplicate sample for sample number 05WC reported 0.0347 µg/L of Aroclor 1260.

All data was reviewed in accordance with USACE protocol. Appendix C contains the data review report for the samples. Appendix D contains the analytical chemistry laboratory reports.

5.1.2 Total Organic Carbon

Analytical results for dissolved organic carbon ranged from 1.83 mg/L in sample 06WC (Pile #1) to 8.19 mg/L (Pile #3). This agrees with the general observation that the sediments within the vicinity of Pile #3 were generally more fine grained than the other two piles. The total organic carbon (as measured by the combination of the dissolved and the particulate phases) ranged from 1.7 mg/L in sample 05WC (Pile #1) to 2.44 mg/L in sample 04WC (Pile #1).

5.2 TURBIDITY MONITORING RESULTS

The turbidity monitoring results are summarized on the Field Turbidity Data Sheets provided in Appendix E. Turbidity during recovery efforts did not exceed the limit set by DEQ of 5 NTU above the previous upcurrent reading. Approximately 580 turbidity measurements were collected during the sampling and recovery efforts. The average for all three locations was

approximately 5-6 NTU. The turbidity measurements ranged from 0.86 NTU to 10.86 NTU at Pile #1; from 1.86 NTU to 10.46 NTU at Pile #2; and, from 2.42 NTU to 9.39 NTU at Pile #3.

5.3 SEDIMENT AND WATER WASTE MANAGEMENT

Following generation of the sediment and river water during the sediment removal activities, each media was sampled by the USACE to characterize the waste and evaluate disposal options. Table 5-2 summarizes the PCB analytical results for each drum of waste generated. Detectable concentrations of Aroclors 1242 and 1248 were reported in the sediment ranging from 0.149 mg/kg to 6,470 mg/kg. Detectable concentrations of Aroclor 1242 were reported in the water ranging from 3.66 µg/L to 42.7 µg/L. The accuracy of these data has not been evaluated. The PCB concentrations are inconsistent with existing site characterization data.

The waste was shipped offsite by USACE for disposal based on the waste characterization results.

5.4 ELECTRICAL EQUIPMENT SAMPLING RESULTS

In order to determine the disposal options for the PCB-containing waste recovered, the equipment was opened and a sample was collected by the USACE from the solid or liquid material in the equipment and analyzed for PCBs. Table 5-3 summarizes the analytical results of the current and previous (December 2000 removal effort) testing of the equipment for PCBs. The results for the coupling capacitor was significantly different than what was reported previously (980 mg/kg vs. 1.99 mg/kg).